

Abstract

Brucellosis is a zoonotic disease in humans and livestock industries that threat public health as well as the country's livestock industry. Due to the fact that to deal with this disease there is no effective vaccine in humans. Therefore, removal of infected animals and vaccination as practical strategies for controlling and preventing disease is international community agreement. Thus,vaccine including live attenuated vaccine Rev.1 (sheep and goats) and S19 and RB51 vaccine (cattle, buffalo and calf) is used. Since the vaccine S19 due to cross-reactions, was prevented the killing and testing policies hence from the national vaccination program removed and vaccine strain RB51 was introduced. The strain RB51 does not cause interference with serum tests to detect infected animals from vaccinated animals. This is because the vaccine strains have rough walls (Rough) . Due to the fact that none of the common serologic methods include Rose Bengal and wright test able to identify vaccinated animal with strain RB51 vaccine from those infected with wild type Brucella therefore, achieving a diagnostic method to identify vaccinated cattle with RB51 vaccine is a necessity.

This study accomplished in 1393 in vaccine research and antigen production laboratory. Atfirst Vaccine Strain RB51 cultured on brucella agar and by PCR amplification was confirmed then rough wall of Brucella abortus strain RB51 were extracted by phenol - chloroform - petroleum ether (Galanos method).

The results of R - LPS (lipopolysaccharide Rough) extraction evaluated by Agar Gel Diffusion method, Limulus Amebocyte Lysate (LAL) test and SDS - PAGE. Formation of clots in the LAL test, sedimentary lines in agar gel diffusion method and 12 kDa band in SDS - PAGE , indicated to appropriate extraction of LPS .

According to the findings , the phenol chloroform- petroleum ether seems to be an ideal method for extracting R - LPS strain RB51 that can be identify vaccinated cattles with Aforementioned vaccine.

Keyword :

Brucella abortus strain RB51, rough lipopolysaccharide (R - LPS), extraction, phenol - chloroform - petroleum ether